

REMARKS

Summary

Claims 1, 6, 10, 11 and 17 have been changed by this amendment. Claims 2-4 and 12-14 remain cancelled. Claims 1, 5-11, and 15-20 are pending in the application.

Claim rejections – 35 USC § 112

The Office Action rejects the changes to claims 1, 6, 10, 11, and 17 that resulted in one of the terms “visibly printed” and “visible printing means” being in each of those claims, citing them as “subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the invention.” Claims 1, 6, 10, 11, and 17 are changed to remove the use of the word “visible” and its derivatives, thereby overcoming this 35 USC §112 rejection and placing the claims in better form for allowance.

Claims 1, 5-11 and 15-20 were rejected under 35 U.S.C. § 103 as being obvious over Halperin et al., 6,226,619 (hereafter, Halperin)

Claims 1 and 10

A.

In order to clearly point out the patentable difference between Halperin and the applicant’s claim 1, each step of the applicant’s claim 1 is closely examined. The applicant’s first step in claim 1 says “obtaining by radio means a first number from an RFID tag associated with the item or item’s packaging”. Halperin also describes an interrogatable tag “with a secret, non-duplicable number stored in the tag” (Col. 2, Lines 50-53). Hence, Halperin’s “secret, non-duplicable number in the tag” is analogized with the applicant’s “first number”.

The applicant’s second step in claim 1 says “determining a second number that is a public-key signature printed on the item or item’s packaging”. Halperin describes numbers (indicia or bar code) on an item in a number of places. For example, Halperin says that “the item includes indicia visible by a purchaser of the item” (Col. 2, Lines 50-53). There are only two explicit instances of indicia on an item mentioned by Halperin that are potentially relevant to this application. The first example of indicia on an item is a serial number (e.g., see Col. 3, Lines

4-7 and Col. 3, Lines 61-63). However, a “serial number” is not a public-key signature, so Halperin’s serial number cannot be analogized with the applicant’s second number. Halperin also mentions an “encrypted serial number” (Col. 7, Lines 31-34), but in this context, the “encrypted serial number” is on a “receipt” not the “item”, so it is not relevant to the applicant’s claim. The second example in Halperin of indicia on an item is a bar code label. After pointing out that the encoded information in a tag may be destroyed upon an item’s sale (Col. 5, Lines 59-63), Halperin goes on to say that after an item is sold, the customer can access a masked bar code label on the item which “also may be provided with encrypted information” (Col. 5, Lines 66-67 through Col. 6, Lines 1-6). Since Halperin mentions no other printed indicia that could possibly be construed as a public-key signature, Halperin’s bar code label could be analogized with the applicant’s “second number” that is a public-key signature.

The applicant’s third step in claim 1 says “utilizing a public-key cryptographic process and the first number to cryptographically verify the second number”. As an illustrative exercise, the analogies from Halperin can be plugged into the language of the applicant’s third step, resulting in the following statement (Halperin’s text is underlined), “utilizing a public-key cryptographic process and the secret, non-duplicable number in the tag to cryptographically verify the bar code label”. Now it is clear that a link between Halperin’s “secret, non-duplicable number in the tag” and the “bar code label” must be found. The only such link in Halperin is where he mentions that the bar code label serves as a backup to the interrogatable tag (“This label could serve as possible corroboration or backup in case the glass-encased tag 2 is inadvertently broken.”) (Col. 5, Lines 66-67 through Col. 6, Lines 1-6). Since the bar code label is merely a “backup” of the secret, non-duplicable number in the tag, it cannot be construed as a public-key signature of the number in the tag. Hence Halperin does not describe a step analogous to the third step in the applicant’s claim 1. The same arguments hold for claim 10.

The Office Action analogizes both the “serial number of the item (the product) and the “encrypted serial number” of the item (from Halperin) to applicant’s second number (the ~~visibly~~ printed public-key signature) of applicant’s claims 1 and 10. The serial number and encrypted serial number are described as separate and distinct items in Halperin.

If the serial number of Halperin is analogized to applicant’s second number, the rejection fails because the serial number of Halperin is not a public-key signature. The only mention of an

encrypted serial number in Halperin is in the context of it being on a receipt. The serial number is not described in Halperin as a public-key signature printed on the package.

That the “serial number” and “encrypted serial number” of Halperin are separate and distinct items is made clear in Halperin, col. 7, lines 30-40, in which both the serial number and encrypted number are named in the same sentence in a form that makes them clearly distinct items to one of ordinary skill in the art (OOSITA). The term “encrypted serial number” appears nowhere else in Halperin. Construing any mention of “serial number” (without the preceding “encrypted”) in Halperin as meaning “encrypted serial number” is a mischaracterization of Halperin.

B. The Office Actions states it would be obvious “to modify the method of Halperin and substituting (sic) or replacing (sic) the encrypted serial number by provide (sic) the method of determining a second number that is public-key signature visibly printed on the item since both are designed to ensure security.” This statement appears to mean that it is obvious to modify Halperin’s method to substitute applicant’s public-key signature for the encrypted serial number of Halperin. Applicant asserts that such a substitution would, under the proposition that the encrypted serial number is also the “unique signature” of Halperin, fail, either because it puts the encrypted serial number into the RFID tag, or for the same reasons mentioned in part A, above .

For these reasons, applicant believes that the obviousness rejection of claims 1 and 10 is properly traversed, and believes that amended claims 1 and 10 are patentable over any art or combination of art cited in this application.

Claim 6

In the rejection of claim 6, the Office Action uses the description from Halperin “the item includes indicia...for comparison with a secret...designating authority” as being analogous to the element of claim 6 of “determining a second number...”. This statement does not provide information that the indicia are cryptographically encoded or not, and therefore they cannot be asserted to be cryptographically encoded from this statement. The Office Action further states “the verification operation may include simply verifying...the number read from the tag with the number on the serial number on the label.” The term “serial number” is not understood to mean a cryptographically encoded number to those of ordinary skill in the art and is not

described in Halperin as such. Therefore this statement provides no support for a description of a number analogous to applicant's claimed second number ~~visibly~~ printed on the item or item packaging.

The Office Action further asserts that it is obvious from figures 1, 3, and 5 that the serial number is visible. It is irrelevant that the serial number is visible since the serial number of Halperin is not analogous to applicant's claimed second number which is required to be obtained from the first number and a cryptographic process. Halperin's serial number is not described as being cryptographically obtained.

For these reasons, applicant believes that amended claim 6 is non-obvious with reference to Halperin, and believes that claim 6 is patentable over any art or combination of art cited in this application.

Claim 11

The Office Action infers that the serial number of Halperin (serial number label 3, fig. 1) is analogous to applicant's second number. But the serial number of Halperin is not encrypted, so the rejection fails because applicant's claim 11 requires the second number to be a cryptographic signature.

The Office Action copies the obviousness rejection of claim 1, which applicant traverses because the obviousness rejection is discussing substituting the "encrypted serial number" of Halperin for applicant's public key signature. The encrypted serial number is irrelevant to claim 11 because the encrypted serial number of Halperin is not analogized to anything in claim 11.

For these reasons, applicant believes that amended claim 11 is non-obvious with reference to Halperin, and believes that claim 11 is patentable over any art or combination of art cited in this application.

Claim 15

Claim 15 requires an optical scanner. The Office Action then states that hand-held readers are inherently optical scanners used for reading bar codes. Applicant assumes that the Office Action is citing Halperin's hand held tag readers, since otherwise the statement that hand-held scanners are inherently optical scanners is clearly not generally true to OOSITA. But Halperin's hand-held tag readers are clearly RFID readers, not bar-code readers, as careful

reading of Halperin reveals. Thus, the characterization of Halperin's hand-held readers as optical readers is a mischaracterization.

Furthermore, the Office Action cites col. 2, lines 45-55 as disclosing that "the item includes indicia... for comparison with a secret... designating authority." This part of Halperin only describes what is on the item, and nowhere describes how such comparisons are done and certainly doesn't mention logic circuitry that is part of a product scanner. Thus, this aspect of the rejection is faulty because logic circuitry is not described as being part of a product scanner.

Then the Office Action states it would be obvious to modify Halperin by replacing the hand-held scanner with an optical scanner (an apparent recognition that they are not inherently the same thing). But this would simply result in an apparatus that has an optical scanner, not an RFID scanner and an optical scanner, since Halperin does not describe an apparatus having two readers.

For these reasons, applicant believes that claim 15 is non-obvious with reference to Halperin, and believes that claim 15 is patentable over any art or combination of art cited in this application.

Claim 17

Claim 17 as evaluated by this Office Action was improperly rejected for the following reasons. For this reason this final rejection must be withdrawn.

The Office Action states that "printing circuitry having the public-key cryptography signature as an input and printing the public-key cryptographic signature upon an item or packaging is described by Halperin: Fig. 1; col. 4 "burned in"; and col. 7, lines 5-15. Figure 1 nowhere has identified upon it a printed public-key cryptographic signature. "Burning In" as described in col. 4 is related to burning fusible links – which is not what one of ordinary skill in the art would term printing. Col. 7, lines 5-15 do not refer to printing.

The Office Action states that it would be obvious from figures 1, 3, and 5 that the tag which contains the signature is visible. This is an irrelevant conclusion. The claim is that the public-key cryptographic signature is printed, not that the tag is visible. The tag in Halperin is either an RFID (readable) tag, which is never described as having visible printing thereon, or an item tag (label) that only has the serial number thereon.

Applicant believes that amended claim 17 is non-obvious with reference to Halperin, and believes that amended claim 17 is patentable over any art or combination of art cited in this application.

Because applicant believes that amended independent claims 1, 6, 10, 11, and 17, and independent claim 15 are patentable, applicant believes that pending claims 5, 7-9, 16, and 18-20 are allowable inasmuch as each is dependent upon one of the independent claims.

Discussion of the Office Action's RESPONSE TO ARGUMENTS**(OA = Office Action, OOSITA = one of ordinary skill in the art)**

OA Sections 31-32. Applicant believes that an important aspect of applicant's argument was misunderstood. This aspect is that anything described in Halperin that can be construed as a public-key signature is always stated to be stored in the readable RFID tag 65 or stored in the readable RFID tag and duplicated on a hidden bar code. Applicant refers to page 6 (last two lines) to page 7, line 14, and pages 11-25) of applicant's prior response (the response to the Non-Final Office Action dated Nov. 27, 2997) for detailed and conclusive support that the reference by Halperin to "tag" in col. 7, lines 12-13 is a reference to the RFID tag, which pages are included herein by reference.

OA Sections 33-34. The OA states that it would be obvious from the figs that the tag that contains the signature is visible. The only thing obvious from the figures is that the item tag (label), which includes a serial number, is visible, and the RFID (readable) tag may be visible. This is irrelevant, since the amended claim states that the public-key signature ~~itself~~ is printed.

OA Sections 35-38. Applicant of course agrees that anything referred to an "encrypted serial number" is encrypted. But when Halperin refers to "serial number" without the preceding adjective "encrypted", applicant asserts it cannot be construed as referring to an encrypted serial number. Especially when both are used in the manner they are used in the lines cited by the OA: "a receipt of the serial number and the encrypted serial number". This clearly distinguishes that when Halperin uses "serial number" alone, an unencrypted serial number is meant. The quote in the OA from Halperin, col. 5, lines 56-59 uses "serial number" without a preceding "encrypted", and therefore is not referring to an encrypted serial number.

OA Sections 39-40. The OA fails to cite any apparatus in Halperin that includes two scanning or reading devices, so any substitution of an RFID reader for an optical reader only results in an apparatus with one scanner or reader, not an optical scanner and an RFID scanner.

OA Sections 41-42. The OA makes a direct quote after citing from Halperin. The quote is on at least page 8 of the OA having notification date 11/27/2007, lines 7-9 of section "As per claim 17" of the OA, and reappears in the recent final OA at lines 7-9 of Section 22. Halperin actually states: "a unique signature is provided by the tag which may be complemented by a bar-code which may be read upon the sale." This is not an explicit statement as to what may be in the

bar-code. Halperin provides a more explicit embodiment at Halperin, col. 5, line 66 to col. 6, line 6, quoted above in the current response to the rejection of claim 1 and 10, which makes it clear that in this embodiment, the information in the bar code can “serve as possible corroboration or backup in case the glass-encased tag 2 is inadvertently broken”.

As to Halperin’s scanning machine, it is clearly an RFID scanner, and does not provide the functions claimed in claim 17.

OA Section 43-44 argues obviousness of printing the signature from the burning of the signature into the tag.

Because of the differences in RFID technology and printing technology, it is not obvious that burning in and printing do the same thing. They serve reasonably different purposes and have different cost and bandwidth and distance-readability issues. They do not both permanently affix the signature on the package or item.

At the time of filing of the Halperin application (1998), RFIDs were well-known to be of limited capacity and digital signatures were also known to be very large. In that case, Halperin (presumably skilled in the art) would have known this and could have chosen a solution that did not require the digital signature in the RFID tag. However, since there is no support in Halperin for putting the digital signature of the RFID data in a printed barcode format, it was apparently not obvious to Halperin, even though the deficiencies of the Halperin approach were even more significant in 1998 than they are now.

Applicant specifically reserves the right to prosecute claims of differing and broader scope than those presented herein, in a continuation application.

The Applicants believe that the subject application, as amended, is in condition for allowance. Such action is earnestly solicited by the Applicants.

In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicant's attorney or agent at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection.

Please charge any fees that may be due to Deposit Account 502117, Motorola, Inc.

Respectfully submitted,

Collins et al.

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